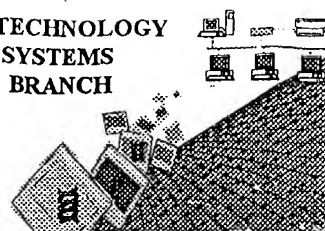# RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/732,862

Source: oipe

Date Processed by STIC: 12-30-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221
Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (**<http://www.uspto.gov/ebc/efs/downloads/documents.htm>** , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (**EFFECTIVE 12/01/03**):
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

RAW SEQUENCE LISTING　　　　　　　　DATE: 12/30/2003
PATENT APPLICATION:　US/10/732,862　　TIME: 15:23:38

Input Set : A:\ICC-136.ST25.txt
Output Set: N:\CRF4\12302003\J732862.raw

```
 3 <110> APPLICANT: Lyons, Katelynne J.
 4         Ashley, Birkett J.
 5         Haron, Jay A.
 7 <120> TITLE OF INVENTION: STABILIZED IMMUNOGENIC HBc CHIMER PARTICLES
 9 <130> FILE REFERENCE: 4564-88881
11 <140> CURRENT APPLICATION NUMBER: US/10/732,862
11 <141> CURRENT FILING DATE: 2003-12-10
11 <150> PRIOR APPLICATION NUMBER: US 60/432,123
12 <151> PRIOR FILING DATE: 2002-10-12
14 <150> PRIOR APPLICATION NUMBER: US 10/274,616
15 <151> PRIOR FILING DATE: 2002-10-21
17 <150> PRIOR APPLICATION NUMBER: US 10/080,299
18 <151> PRIOR FILING DATE: 2002-02-21
20 <150> PRIOR APPLICATION NUMBER: US 10/082,014
21 <151> PRIOR FILING DATE: 2002-02-22
23 <160> NUMBER OF SEQ ID NOS: 455
25 <170> SOFTWARE: PatentIn version 3.2
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 183
29 <212> TYPE: PRT
30 <213> ORGANISM: Hepatitis B virus
32 <400> SEQUENCE: 1
34 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
35 1               5                   10                  15
38 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
39             20                  25                  30
42 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
43             35                  40                  45
46 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
47         50                  55                  60
50 Leu Met Thr Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala
51 65                  70                  75                  80
54 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys
55                  85                  90                  95
58 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
59             100                 105                 110
62 Glu Thr Val Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
63             115                 120                 125
66 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
67         130                 135                 140
70 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
71 145                 150                 155                 160
74 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
```

RAW SEQUENCE LISTING
PATENT APPLICATION: **US/10/732,862**

DATE: 12/30/2003
TIME: 15:23:38

Input Set : **A:\ICC-136.ST25.txt**
Output Set: **N:\CRF4\12302003\J732862.raw**

```
 75                      165                    170                     175
 78 Gln Ser Arg Glu Ser Gln Cys
 79               180
 82 <210> SEQ ID NO: 2
 83 <211> LENGTH: 185
 84 <212> TYPE: PRT
 85 <213> ORGANISM: Hepatitis B virus
 87 <400> SEQUENCE: 2
 89 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
 90 1               5                   10                  15
 93 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
 94               20                  25                  30
 97 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
 98           35                  40                  45
101 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
102       50                  55                  60
105 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Gln Asp Pro Ala
106 65                  70                  75                  80
109 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Met Gly Leu Lys
110                   85                  90                  95
113 Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
114               100                 105                 110
117 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
118           115                 120                 125
121 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
122       130                 135                 140
125 Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
126 145                 150                 155                 160
129 Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
130               165                 170                 175
133 Arg Ser Gln Ser Arg Glu Ser Gln Cys
134               180                 185
137 <210> SEQ ID NO: 3
138 <211> LENGTH: 185
139 <212> TYPE: PRT
140 <213> ORGANISM: Hepatitis B virus
142 <400> SEQUENCE: 3
144 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
145 1               5                   10                  15
148 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
149               20                  25                  30
152 Thr Ala Ser Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys
153           35                  40                  45
156 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu
157       50                  55                  60
160 Leu Met Thr Leu Ala Thr Trp Val Gly Asn Asn Leu Glu Asp Pro Ala
161 65                  70                  75                  80
164 Ser Arg Asp Leu Val Val Asn Tyr Val Asn Thr Asn Val Gly Leu Lys
165                   85                  90                  95
```

```
168 Ile Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
169             100                 105             110
172 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
173         115                 120                 125
176 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
177     130                 135             140
180 Glu Thr Thr Val Val Arg Arg Arg Asp Arg Gly Arg Ser Pro Arg Arg
181 145                 150                 155                 160
184 Arg Thr Pro Ser Pro Arg Arg Arg Pro Ser Gln Ser Pro Arg Arg Arg
185             165                 170             175
188 Arg Ser Gln Ser Arg Glu Ser Gln Cys
189             180                 185
192 <210> SEQ ID NO: 4
193 <211> LENGTH: 183
194 <212> TYPE: PRT
195 <213> ORGANISM: Hepatitis B virus
197 <400> SEQUENCE: 4
199 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu
200 1               5               10                  15
203 Ser Phe Leu Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp
204             20              25              30
207 Thr Ala Ala Ala Leu Tyr Arg Asp Ala Leu Glu Ser Pro Glu His Cys
208         35              40                  45
211 Ser Pro His His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Asp
212     50              55                  60
215 Leu Met Thr Leu Ala Thr Trp Val Gly Thr Asn Leu Glu Asp Pro Ala
216 65              70                  75                  80
219 Ser Arg Asp Leu Val Val Ser Tyr Val Asn Thr Asn Val Gly Leu Lys
220             85                  90                  95
223 Phe Arg Gln Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg
224             100                 105             110
227 Glu Thr Val Leu Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr
228         115                 120                 125
231 Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
232     130                 135             140
235 Glu Thr Thr Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr
236 145                 150                 155                 160
239 Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser
240             165                 170             175
243 Gln Ser Arg Glu Ser Gln Cys
244             180
247 <210> SEQ ID NO: 5
248 <211> LENGTH: 183
249 <212> TYPE: PRT
250 <213> ORGANISM: woodchuck
252 <400> SEQUENCE: 5
254 Met Asp Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu
255 1               5                   10                  15
258 Asn Phe Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp
```

```
259              20              25              30
262 Thr Ala Thr Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys
263          35              40              45
266 Ser Pro His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Asp Glu
267      50              55              60
270 Leu Thr Lys Leu Ile Ala Trp Met Ser Ser Asn Ile Thr Ser Glu Gln
271 65              70              75              80
274 Val Arg Thr Ile Ile Val Asn His Val Asn Asp Thr Trp Gly Leu Lys
275              85              90              95
278 Val Arg Gln Ser Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gln
279          100             105             110
282 His Thr Val Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr
283          115             120             125
286 Pro Ala Pro Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro
287      130             135             140
290 Glu His Thr Val Ile Arg Arg Arg Gly Gly Ala Arg Ala Ser Arg Ser
291 145             150             155             160
294 Pro Arg Arg Arg Thr Pro Ser Pro Arg Arg Arg Arg Ser Gln Ser Pro
295              165             170             175
298 Arg Arg Arg Arg Ser Gln Cys
299              180
302 <210> SEQ ID NO: 6
303 <211> LENGTH: 217
304 <212> TYPE: PRT
305 <213> ORGANISM: ground squirrel
307 <400> SEQUENCE: 6
309 Met Tyr Leu Phe His Leu Cys Leu Val Phe Ala Cys Val Pro Cys Pro
310 1            5               10              15
313 Thr Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Asp Met Asp
314          20              25              30
317 Ile Asp Pro Tyr Lys Glu Phe Gly Ser Ser Tyr Gln Leu Leu Asn Phe
318          35              40              45
321 Leu Pro Leu Asp Phe Phe Pro Asp Leu Asn Ala Leu Val Asp Thr Ala
322      50              55              60
325 Ala Ala Leu Tyr Glu Glu Glu Leu Thr Gly Arg Glu His Cys Ser Pro
326 65              70              75              80
329 His His Thr Ala Ile Arg Gln Ala Leu Val Cys Trp Glu Glu Leu Thr
330          85              90              95
333 Arg Leu Ile Thr Trp Met Ser Glu Asn Thr Thr Glu Glu Val Arg Arg
334          100             105             110
337 Ile Ile Val Asp His Val Asn Asn Thr Trp Gly Leu Lys Val Arg Gln
338          115             120             125
341 Thr Leu Trp Phe His Leu Ser Cys Leu Thr Phe Gly Gly His Thr Val
342      130             135             140
345 Gln Glu Phe Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Ala Pro
346 145             150             155             160
349 Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu His Thr
350              165             170             175
353 Val Ile Arg Arg Arg Gly Gly Ser Arg Ala Ala Arg Ser Pro Arg Arg
```

RAW SEQUENCE LISTING   DATE: 12/30/2003
PATENT APPLICATION: **US/10/732,862**   TIME: 15:23:39

Input Set : **A:\ICC-136.ST25.txt**
Output Set: **N:\CRF4\12302003\J732862.raw**

```
354                180              185               190
357 Arg Thr Pro Ser Pro Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg
358         195          200              205
361 Arg Ser Gln Ser Pro Ala Ser Asn Cys
362      210              215
365 <210> SEQ ID NO: 7
366 <211> LENGTH: 51
367 <212> TYPE: DNA
368 <213> ORGANISM: Artificial Sequence
370 <220> FEATURE:
371 <223> OTHER INFORMATION: modified plasmid pkk223
373 <400> SEQUENCE: 7
374 ttcacacagg aaacagaatt cccgggggatc cgtcgacctg cagccaagct t          51
377 <210> SEQ ID NO: 8
378 <211> LENGTH: 38
379 <212> TYPE: DNA
380 <213> ORGANISM: Artificial Sequence
382 <220> FEATURE:
383 <223> OTHER INFORMATION: plasmid pkk223
385 <400> SEQUENCE: 8
386 ttcacataag gaggaaaaaa ccatgggatc cgaagctt                          38
389 <210> SEQ ID NO: 9
390 <211> LENGTH: 19
391 <212> TYPE: PRT
```

C--> 392 `<213> ORGANISM: Artficial sequence`
W--> 394 `<220> FEATURE:`
W--> 394 `<223> OTHER INFORMATION:`
W--> 394 `<400> 9`

See pg. 6 mandatory response missing.

```
396 Ile Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn Pro Asn Ala Asn
397 1               5              10             15
400 Pro Glu Leu
404 <210> SEQ ID NO: 10
405 <211> LENGTH: 21
406 <212> TYPE: PRT
407 <213> ORGANISM: Artificial sequence
409 <220> FEATURE:
410 <223> OTHER INFORMATION: Chimera of malarial T cell epitope and hepatitis B
412 <400> SEQUENCE: 10
414 Ile Glu Tyr Leu Asn Lys Ile Gln Asn Ser Leu Ser Thr Glu Trp Ser
415 1               5              10             15
418 Pro Cys Ser Val Thr
419             20
422 <210> SEQ ID NO: 11
423 <211> LENGTH: 15
424 <212> TYPE: PRT
425 <213> ORGANISM: Streptococcus pneumoniae
427 <400> SEQUENCE: 11
429 Lys Leu Glu Glu Leu Ser Asp Lys Ile Asp Glu Leu Asp Ala Glu
430 1               5              10             15
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 12/30/2003
PATENT APPLICATION: **US/10/732,862**   TIME: 15:23:40

Input Set : **A:\ICC-136.ST25.txt**
Output Set: **N:\CRF4\12302003\J732862.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:41; Xaa Pos. 1,2,3,4,5,6,7,8,15,16,17,18,19,20,21,22,23
Seq#:42; Xaa Pos. 1,2,3,4,5,6,7,8,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Seq#:42; Xaa Pos. 29,30,31,38,39,40,41,42,43,44,45,46,47
Seq#:43; Xaa Pos. 1,2,3,4,5,6,7,8,15,16,17,18,19,20,21,22,23,24,25,26,27,28
Seq#:43; Xaa Pos. 29,30,31,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53
Seq#:43; Xaa Pos. 54,61,62,63,64,65,66,67,68,69,70
Seq#:44; Xaa Pos. 1,2,3,4,5,6,7,8,10,11,13,14,15,16,17,18,19,20,21,22,23,24
Seq#:45; Xaa Pos. 1,2,3,4,5,6,7,8,10,11,13,14,15,16,17,18,19,20,21,22,23,24
Seq#:45; Xaa Pos. 25,26,27,28,29,30,31,33,34,36,37,38,39,40,41,42,43,44,45
Seq#:45; Xaa Pos. 46,47
Seq#:46; Xaa Pos. 1,2,3,4,5,6,7,8,10,11,13,14,15,16,17,18,19,20,21,22,23,24
Seq#:46; Xaa Pos. 25,26,27,28,29,30,31,33,34,36,37,38,39,40,41,42,43,44,45
Seq#:46; Xaa Pos. 46,47,48,49,50,51,52,53,54,56,57,59,60,61,62,63,64,65,66
Seq#:46; Xaa Pos. 67,68,69,70
```

Use of <220> Feature(NEW RULES):
Sequence(s)__are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or"Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32) (Sec.1.823 of new Rules)

Seq#:9,412

VERIFICATION SUMMARY
PATENT APPLICATION: **US/10/732,862**

DATE: 12/30/2003
TIME: 15:23:40

Input Set : **A:\ICC-136.ST25.txt**
Output Set: **N:\CRF4\12302003\J732862.raw**

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:392 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:9
L:394 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:9, <213>
ORGANISM:Artificial Sequence
L:394 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:9, <213>
ORGANISM:Artificial Sequence
L:394 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:9,Line#:394
L:934 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
M:341 Repeated in SeqNo=41
L:965 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
M:341 Repeated in SeqNo=42
L:1005 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
M:341 Repeated in SeqNo=43
L:1048 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:44 after pos.:0
M:341 Repeated in SeqNo=44
L:1089 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0
M:341 Repeated in SeqNo=45
L:1144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:0
M:341 Repeated in SeqNo=46
L:6316 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:412
L:6318 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:412, <213>
ORGANISM:Artificial Sequence
L:6318 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:412, <213>
ORGANISM:Artificial Sequence
L:6318 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:412,Line#:6318